

CLAIMS

What is claimed is:

- 1 1. A network comprising:
2 a plurality of network nodes;
3 a plurality of routing devices to route network traffics between selected ones
4 of said network nodes; and
5 a director coupled to said routing devices to determine whether selected
6 instances of source addresses of packets routed by said routing devices are spoof
7 source addresses, based at least in part on one or more consistency measures.
- 1 2. The network of claim 1, wherein the director bases said determination on at
2 least spatial distribution profiles of said source addresses, and in view of at least
3 one reference source address spatial distribution profile.
- 1 3. The network of claim 2, wherein said at least one reference source address
2 spatial distribution profile comprises at least a selected one of an exemplary spatial
3 distribution profile for a non-spoof source address in general, and a historical spatial
4 distribution profile for a particular source address.
- 1 4. The network of claim 1, wherein the director bases said determination on at
2 least destination source address range (DSAR) distribution profiles of said source
3 addresses, and in view of at least one reference DSAR distribution profile.

1 10. The network of claim 1, wherein the director is further equipped to determine
2 whether filtering actions are to be taken to filter out packets with source addresses

7 managing said network based at least in part on the results of said
8 determination.

1 16. The method of claim 15, wherein said determination is made based at least in
2 part on spatial distribution profiles of said source addresses, and in view of at least
3 one reference source address spatial distribution profile.

1 17. The method of claim 16, wherein said determining comprises constructing
2 said spatial distribution profiles of said source addresses.

1 18. The method of claim 16, wherein said determining comprises determining
2 whether each of the spatial distribution profiles of the source addresses is within a
3 resemblance tolerance limit when compared to each of the at least one reference
4 source address spatial distribution profile.

1 19. The method of claim 16, wherein said at least one reference spatial
2 distribution profile comprises at least a selected one of an exemplary spatial
3 distribution profile for a non-spoof source address in general, and a historical spatial
4 distribution profile for a particular source address.

1 20. The method of claim 15, wherein said determination is made based at least in
2 part on destination source address range (DSAR) distribution profiles of said source
3 addresses, and in view of at least one reference DSAR distribution profile.

1 21. The method of claim 20, wherein said determining comprises constructing
2 said DSAR distribution profiles of said source addresses.

1 22. The method of claim 20, wherein said determining comprises determining
2 whether each of the DSAR distribution profiles of the source addresses is within a
3 resemblance tolerance limit when compared to each of the at least one reference
4 source address DSAR distribution profile.

1 23. The method of claim 20, wherein said at least one reference DSAR
2 distribution profile comprises at least a selected one of an exemplary DSAR
3 distribution profile for a non-spoof source address in general, and a historical DSAR
4 distribution profile for a particular source address.

1 24. The method of claim 15, wherein said determination is made based at least in
2 part on migration distribution profiles of said source addresses, and in view of at
3 least one reference migration distribution profile.

1 25. The method of claim 24, wherein said determining comprises constructing
2 said migration distribution profiles of said source addresses.

1 26. The method of claim 24, wherein said determining comprises determining
2 whether each of the migration distribution profiles of the source addresses is within
3 a resemblance tolerance limit when compared to each of the at least one reference
4 source address migration distribution profile.

1 27. The method of claim 24, wherein said at least one reference migration
2 distribution profile comprises at least a selected one of an exemplary migration

1 33. The method of claim 32, wherein said where determination comprises taking
2 into consideration where packets of non-spoof instances of a source address having
3 instances deemed to be spoof source addresses are likely to be routed in said
4 network.

1 34. An apparatus comprising:

2 (a) a storage medium having stored therein a plurality of programming
3 instructions designed to implement a director to receive reporting of information
4 associated with source addresses of packets routed through a plurality of routing
5 devices of a network, and to determine whether at least some instances of said
6 source addresses are spoof instances; and

7 (b) a processor coupled the storage medium to execute the programming
8 instructions.

1 35. The apparatus of claim 34, wherein said programming instructions are
2 designed to make said determination based on at least spatial distribution profiles of
3 said source addresses, and in view of at least one reference source address spatial
4 distribution profile.

1 36. The apparatus of claim 35, wherein said programming instructions are
2 designed to be able to construct said spatial distribution profiles of said source
3 addresses.

1 37. The apparatus of claim 35, wherein said programming instructions are
2 designed to be able to determine whether each of the spatial distribution profiles of

1 42. The apparatus of claim 41, wherein said programming instructions are
2 designed to be able to construct said migration distribution profiles of said source
3 addresses.

1 47. The apparatus of claim 34, wherein said programming instructions are
2 designed to be able to determine whether filtering actions are to be taken in said
3 network to filter out at least some packets having source addresses deemed to be
4 having spoof instances, and if filtering actions are to be taken, further determine
5 where among a plurality of routing devices, said filtering actions are to be taken.

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